

Electron Collector System

Abstract

A slotted window collector assembly for an x-ray tube having an anode and a cathode includes a collector having an anode side and a cathode side, which opposes the anode side. The anode side and the cathode side define an internal bore there between for receiving x-rays from the anode. The slotted collector further includes a window side common to both the anode side and the cathode side and having a window coupled thereto, wherein a window aperture is defined extending from the window to the internal bore. Within the collector assembly, a slot is defined intersecting the window aperture and extending trans-axially thereto and beyond a set length. The slot also extends circumferentially with the window such that plastic strain on the window and heat transferred to the window are reduced.